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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/505,141

08/20/2004

Koji Tsukuma

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07/07/2006

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EXAMINER

VAN DYKE, TIMOTHY C

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/505,141 | Applicant(s) TSUKUMA ET AL. | |
| | Examiner Timothy C. Vanoy | Art Unit 1754 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 8, 9 and 11 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract in this specification is not in the form of a single paragraph, and is not limited to 150 words or less.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6, 7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan Patent Document No. 2002-53,321 A (hence "JP-321").

The Derwent English abstract of JP-321 discloses lithium manganese oxide in the form of "grape clusters" of particles containing LiMn_2O_4 . The particles have a diameter of 1 to 100 micrometers, and a specific surface area of 0.1 to 10 m^2/g . The composition is form of primary and secondary particles.

The composition was made be mixing manganese dioxide with a water soluble lithium compound. The mixed solution was dried, and then heated at 500 to 900 °C to produce the composition.

The composition is used as an active material for a lithium secondary battery.

Claims 6, 7 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent 6,706,444 B1 to Numata et al.

The Numata et al. patent describes a process for making lithium manganate spinel structure compound (please see col. 3 lines 2 and 3), comprising

mixing together manganese dioxide, a lithium compound that may be lithium carbonate and also a substituent compound that may be an oxide or hydroxide of aluminum, magnesium, chromium, cobalt and/or nickel (please see col. 3 lines 1-3 and also lines 50-67 and also col. 4 lines 1-9);

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subjecting the mixture to a granulation process (which may be a wet process) and which may be accomplished by spray dry granulation (please see col. 4 lines 24-28), and

burning the resulting granules at a temperature ranging from 750 to 1,000 °C to obtain the lithium manganate spinel structure composition (please see col. 4 lines 30-33), as set forth in applicants' claims 6 and 7.

The process may also use oxides and hydroxides of calcium, titanium, etc. (please see col. 4 lines 6-10), as set forth in applicants' claim 10.

Claims 3, 4, 5, 8, 9 and 11 have not been rejected under either 35USC102 or 35USC103 because the limitations of these claims are not taught or suggested in either Japan Patent Document 2002-53,321 A or U. S. Patent 6,706,444 B1.

The following references are made of record:

U. S. Patent 7,008,608 B2 disclosing Li-Co-Mn oxide as cathode material for lithium batteries;

U. S. Patent 6,998,069 B1 disclosing electrode material for positive electrodes;

U. S. Patent 6,875,416 B1 disclosing a spray drying process for making lithium-transition metal mixtures (please see col. 3 line 50, for example), and

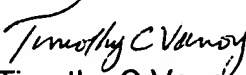
U. S. Patent 6,670,076 B1 disclosing spinel-type lithium-manganese oxides.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Timothy C Vanoy
Primary Examiner
Art Unit 1754

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